

THAT WHICH IS CLAIMED:

1. An electromagnetic interference shield for blocking and dissipating electromagnetic interference, said shield comprising:
  - a primary conductive member having a first attachment surface, said
  - 5 primary conductive member including at least one catch extending outwardly from the first attachment surface; and
  - an absorptive member having a second attachment surface facing the first attachment surface, said absorptive member defining at least one receptacle;
  - wherein the catch from the primary conductive member extends through
  - 10 the entrance into the receptacle of the absorptive member such that the absorptive member is capable of being firmly secured on the catch.
2. An electromagnetic interference shield of Claim 1, wherein the absorptive member remains rigidly secured through a temperature range of 139 °C to 220 °C.
3. An electromagnetic interference shield of Claim 1, wherein the absorptive
- 15 member remains rigidly secured through a temperature range of 139 °C to 260 °C.
4. An electromagnetic interference shield of Claim 1, wherein the primary conductive member has a plurality of the catches and the absorptive member defines a plurality of the receptacles each receiving a respective one of the catches.
5. An electromagnetic interference shield of Claim 4, wherein the primary
- 20 conductive member is a malleable sheet material and wherein the catches extend outwardly therefrom.
6. An electromagnetic interference shield of Claim 4, wherein each of the catches has a relatively sharp edge capable of penetrating the absorptive member to form the receptacles therein.
- 25 7. An electromagnetic interference shield of Claim 4, wherein the receptacles are pre-formed in the absorptive member.

8. An electromagnetic interference shield of Claim 4, wherein the primary conductive member includes a polymer sheet preformed with the catches extending from the first attachment surface and wherein the polymer sheet is coated with a conductive material.

5 9. An electromagnetic interference shield of Claim 4, wherein the catches extend entirely through the absorptive member to an opposite surface and are bent into approximate alignment with the opposite surface.

10 10. An electromagnetic interference shield of Claim 1, wherein the absorptive member is constructed of a resin composite material having a combination of conductive and absorptive materials.

11. An electromagnetic interference shield of Claim 1, wherein the absorptive member is constructed of a laminate material having layers of conductive material and layers of absorptive material.

15 12. An electromagnetic interference shield of Claim 1, wherein the absorptive member is constructed of a conductive mesh encased within a polymer matrix.

13. An electromagnetic interference shield of Claim 1, wherein the absorptive member is constructed of a non-conductive mesh encased within a conductive foam structure.

20 14. A method of manufacturing an electromagnetic interference shield, said method comprising:

providing a plurality of catches on a primary conductive member;  
providing a plurality of receptacles in an absorptive member; and  
mounting the absorptive member to the primary conductive member by  
positioning the catches in the receptacles.

25 15. A method of Claim 14, wherein providing and mounting occur simultaneously by bringing a first attachment surface of the conductive member, from which the catches extend, into contact with a second attachment surface of the absorptive

member so that the catches penetrate the second surface and become embedded in the absorptive member and form the receptacles.

16. A method of Claim 14, further comprising soldering the conductive member to a circuit board of a mobile station.

5 17. A method of Claim 14, wherein providing the receptacles includes defining the receptacles in the absorptive member so that the receptacles extend from a second attachment surface of the absorptive member to an opposite surface of the absorptive member, said method further comprising bending ends of the catches over portions of the opposite surface.

10 18. A method of Claim 14, wherein forming the plurality of catches includes punching holes into the primary conductive member.

19. A method of Claim 18, wherein punching holes includes punching holes with a triangular punch to form triangular catches.

15 20. A method of Claim 14, wherein defining the receptacles includes cutting the receptacles in the absorptive member prior to positioning the catches in the receptacles.

21. A method of Claim 20, wherein defining the receptacles includes one of die cutting, water jet drilling, laser drilling, bit drilling and ultrasonically cutting the absorptive member.

20 22. A method of Claim 14, wherein forming the catches includes molding the primary conductive member with the catches thereon.

23. A method of Claim 22, further comprising applying a conductive coating to the molded primary conductive member and the catches.

25 24. A method of Claim 14, further comprising forming the absorptive member prior to defining the receptacles therein.

25. A method of Claim 24, wherein forming the absorptive member includes encasing a conductive mesh within an absorptive polymer matrix.
26. A method of Claim 24, wherein forming the absorptive member includes adding conductive materials to a polymer.
- 5 27. A method of Claim 24, wherein forming the absorptive member includes forming a laminate with layers of conductive and absorptive materials.
28. A method of Claim 24, wherein forming the absorptive member includes embedding an absorptive mesh into a conductive foam material.
29. A method of Claim 24, further comprising soldering electronic  
10 components to the primary conductive member.
30. An electromagnetic interference shield for blocking and dissipating electromagnetic interference, said shield comprising:  
a primary conductive member having a first attachment surface, said  
primary conductive member including at least two catches extending outwardly from the  
15 first attachment surface; and  
an absorptive member having a second attachment surface facing the first attachment surface and at least two opposite edges;  
wherein each of the catches extends along a respective one of the opposite edges so as to hold the absorptive member between the catches.
- 20 31. An electromagnetic interference shield of Claim 30, wherein the absorptive member remains rigidly secured through a temperature range of 139 °C to 260 °C.
32. An electromagnetic interference shield of Claim 30, wherein the primary conductive member has a plurality of the catches and the absorptive member defines a  
25 plurality of the receptacles each receiving a respective one of the catches.

33. An electromagnetic interference shield of Claim 32, wherein the primary conductive member is a malleable sheet material and wherein the catches extend outwardly therefrom.

34. A mobile station, said mobile station comprising:  
5 an electronic circuit assembly;  
a primary conductive member having a first attachment surface, said primary conductive member including at least one catch extending outwardly from the first attachment surface and said primary conductive member connected via a conductive pathway to the electronic circuit assembly; and  
10 an absorptive member having a second attachment surface facing the first attachment surface, said absorptive member defining at least one receptacle;  
wherein the catch from the primary conductive member extends through the entrance into the receptacle of the absorptive member such that the absorptive member is capable of being firmly secured on the catch and wherein the primary  
15 conductive member and absorptive member together shield the electronic circuit assembly from electromagnetic interference.

35. A mobile station of Claim 34, wherein the absorptive member remains rigidly secured through a temperature range of 139 °C to 260 °C.

36. A mobile station of Claim 34, wherein the primary conductive member  
20 has a plurality of the catches and the absorptive member defines a plurality of the receptacles each receiving a respective one of the catches.

37. A mobile station Claim 36, wherein the primary conductive member is a malleable sheet material and wherein the catches extend outwardly therefrom.

38. A mobile station of Claim 37, wherein each of the catches has a relatively  
25 sharp edge capable of penetrating the absorptive member to form the receptacles therein.

39. An electromagnetic interference shield for blocking and dissipating electromagnetic interference, said shield comprising:  
a primary conductive member having a first attachment surface;

an absorptive member having a second attachment surface facing the first attachment surface, said absorptive member defining a plurality of openings positioned to form a fractal pattern; and

5 a plurality of ground connections electrically connecting the absorptive member to the primary conductive member, each of said ground connections positioned at a respective one of the plurality of openings forming the fractal pattern.

40. An electromagnetic interference shield of Claim 39, wherein each of the ground connections includes a catch extending from the primary conductive member into the respective opening.

10 41. An electromagnetic interference shield of Claim 40, wherein the primary conductive member is a malleable sheet material and wherein the catches extend outwardly therefrom.

42. An electromagnetic interference shield of Claim 41, wherein each of the catches has a relatively sharp edge capable of penetrating the absorptive member to form  
15 the receptacles therein.

43. A method of manufacturing an electromagnetic interference shield, said method comprising:

providing a primary conductive member;  
providing a plurality of receptacles in an absorptive member, wherein said  
20 receptacles are positioned in a fractal pattern;  
mounting the absorptive member to the primary conductive member; and  
electrically connecting the absorptive member and primary conductive member at the plurality of receptacles.

44. A method of Claim 43, wherein providing the primary conductive member  
25 includes providing a plurality of catches on the primary conductive member and wherein electrically connecting the members includes positioning the catches in the receptacles

45. A method of Claim 44, wherein forming the plurality of catches includes punching holes into the primary conductive member.

46. A method of Claim 43, wherein providing the receptacles includes defining the receptacles in the absorptive member so that the receptacles extend from a second attachment surface of the absorptive member to an opposite surface of the absorptive member, said method further comprising bending ends of the catches over  
5 portions of the opposite surface.